



**CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE (DEPARTMENT)
DECLARATION OF LIFTING SEASON DELAY AND DEPTH CONSTRAINT FOR THE
COMMERCIAL DUNGENESS CRAB FISHERY AND TEMPORARY CRAB TRAP
PROHIBITION FOR THE RECREATIONAL CRAB FISHERY, AND MODIFIED FLEET
ADVISORY DUE TO RISK OF MARINE LIFE ENTANGLEMENT**

Pursuant to Fish and Game Code Section 8276.1(b) and California Code of Regulations, Title 14, Sections 132.8 (“Section 132.8”) and Section 29.80(c)(7) (“Section 29.80(c)(7)”), I find and declare that:

I

On December 15, 2021, I evaluated entanglement risk for the commercial Dungeness crab fishery pursuant to Section 132.8(b) and the recreational fishery pursuant to Section 2980(c). I provided the California Dungeness Crab Fishing Gear Working Group (Working Group) and the Whale Safe Fisheries email listserv with notice of the risk assessment and all non-confidential data under consideration on December 13, 2021. Prior to this risk assessment and management response, I considered the Working Group’s December 14, 2021, management recommendation, and other relevant information provided to my staff.

II

Aerial surveys undertaken by NOAA/Upwell on December 10, 2021, observed 33 Humpback whales in Fishing Zone 3. Pursuant to 132.8(c)(2)(A)(4)(a) I must implement a Fishing Zone delay or other protective management action.

III

Section 132.8(b)(4) requires that when new information so indicates, I must lift or modify any commercial fishing restrictions in a manner that promotes fair and orderly fisheries. Similarly, Section 28.80(c)(7)(B)(2) requires that I lift or modify the recreational Dungeness crab season delay as appropriate.

V

Three recognized port entities in Fishing Zone 3, as well as multiple members of the Working Group, requested additional delay of the commercial season in Fishing Zone 3 to allow additional time for the commercial fishery and related infrastructure to find sufficient crew staffing and increase processor capacity to ensure an orderly start to the commercial season in that Zone.

VI

Upon evaluation of the management considerations pursuant to Section 132.8(d), I have determined that the management action listed below protects Humpback whales based on the best available science. Additional information on the relevant management considerations is provided in the attachment to this declaration

VII

THEREFORE, under the authority granted by Fish and Game Code Section 8276.1(b), and Sections 132.8 and 28.80(c) of Title 14 of the California Code of Regulations, I am implementing the following management action:

1. Continuation of the temporary recreational trap prohibition in Fishing Zone 3 until December 17, 2021 at 9:00am. Beginning at that time, recreational crab traps will no longer be prohibited in Fishing Zone 3. The season will be subject to a Fleet Advisory as described below.
2. Continuation of the delay of the opening of the commercial Dungeness crab fishery in Fishing Zone 3 until December 29, 2021, at 12:01am. Take and possession of commercially caught Dungeness crab is prohibited in Fishing Zone 3 until that time. The pre-soak period in Fishing Zone 3 will begin at 8:01am on December 26, 2021. The season opening will be subject to a Fleet Advisory as described below.
3. Continuation of the Depth Constraint for Fishing Zone 4 to limit fishing activity to less than 40 fathoms until December 26, 2021, at 8:01am. Commercial crab traps shall not be used or placed in Zone 4 waters seaward of the 40-fathom contour line as defined by connecting the appropriate set of waypoints adopted in Federal regulations and published in Title 50, Code of Federal Regulations Part 660. While engaged in fishing activity, all vessels must carry onboard an electronic monitoring system capable of recording the vessel's location using GPS coordinates at a frequency of no less than once per minute during fishing operations. Electronic monitoring data must be made available to the Department upon request for the duration of the fishing period and 60 days thereafter.
4. Fleet Advisory for both commercial and recreational fisheries in all Fishing Zones (Zones 1-6). Both the commercial and recreational fishing fleet should remain vigilant and move or avoid setting trap gear in areas where whales are transiting or foraging to further minimize risk of entanglement, particularly in deep water areas of Zone 4 (canyon edges and the shelf break). As well as an area off Pigeon Point in San Mateo County in depths between 50 and 100 fathoms along the border of Zones 3 and 4.

This management action is in effect until the next risk assessment, which is expected to occur on or around January 15, 2022.

Dungeness Crab Declaration of Lifting of Season Delay, Depth Constraint, Temporary Recreational
Crab Trap Prohibition, and Modification of Fleet Advisory
California Department of Fish and Wildlife
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Updates and material regarding future entanglement risk evaluations in the commercial
Dungeness crab fishery will be made available on the [Department's Whale Safe Fisheries
web page.](#)



Charlton H. Bonham, Director

12-15-21 2:50 PM PT
Date/Time

ATTACHMENT TO DIRECTOR DECEMBER 15, 2021, DECLARATION OF FISHERY LIFTING SEASON DELAY AND DEPTH CONSTRAINT FOR THE COMMERCIAL DUNGENESS CRAB FISHERY AND TEMPORARY CRAB TRAP PROHIBITION FOR THE RECREATIONAL CRAB FISHERY, AND MODIFIED FLEET ADVISORY DUE TO RISK OF MARINE LIFE ENTANGLEMENT

Information referenced in this Attachment is further described in the Available Data document dated December 13, 2021 and located at the Department's Whale Safe Fisheries website (<https://wildlife.ca.gov/Conservation/Marine/Whale-Safe-Fisheries>), which to the Department's knowledge represents the best available science informing the management considerations in Section 132.8(d).

Information Supporting Trigger for Management Action Under Section 132.8(c)

Marine Life Concentrations:

- **Fishing Zone 3:** 33 whales observed by NOAA/Upwell aerial survey

Relevant Management Considerations Under Section 132.8(d)

1. Working Group Management Action Recommendation and Best Available Science Made Available to the Department

The Working Group advanced a recommendation to further delay the season based on continued presence of whales until January 1, 2022. This recommendation received mixed support among the membership.

Working Group also recommended lifting the depth constraint in Zone 4 when Zone 3 opens, and this received broad support by the Working Group members. This is also consistent with the CDFW recommendation.

The recreational Working Group member recommended an immediate opening of the recreational fishery. This recommendation did not receive support from the membership.

2. Information from NOAA

No additional information was made available for this risk assessment.

3. Effectiveness of Management Measures to Minimize Entanglement Risk

Recent survey data in Fishing Zones 3 and 4 indicate that migration has begun and remaining whales are moving out of California waters. Therefore, entanglement risk is significantly reduced compared to the beginning of the season. Any additional time before a commercial season opener in Fishing Zone 3 and lifting the Depth Constraint in Fishing Zone 4 will allow additional Humpback whales to migrate out of

California waters. A Fleet Advisory will ensure both the commercial and recreational fleets are aware of the possibility of marine life entanglements in the area, even though risk is low, and encourage them to modify fishing practices accordingly.

4. Total Economic Impact to the Fleet and Fishing Communities

Total economic costs are considered when deciding between management measures that equivalently reduce entanglement risk. Current considerations include the possible loss of the holiday market, possible fishing effort shift, and general economic impacts due to the ongoing COVID pandemic. Lifting the season delay in Fishing Zone 3 and the Depth Constraint in Fishing Zone 4 will maximize fishing opportunity for commercial fish businesses and vessel operators.

5. Data Availability Within and Across Fishing Zones

NOAA/Upwell aerial survey data are available for Zones 3 and 4. Cascadia Research vessel survey data are available for Zones 3 and 4. Monterey Bay Whale Watch (MBWW) data are available for Zone 4. The Department considers this data set to adequately cover the full geographic extent of Fishing Zones 3 and 4 (the only remaining Zones currently being evaluated for entanglement risk prior to opening) to inform the appropriate management response.

6. Known Historic Marine Life Migration Patterns

Seasonal migration for Humpback whales out of California waters typically occurs in November and early December. Humpback whales are anticipated to migrate from north-central California, where Humpback concentrations were higher throughout the fall in Fishing Zones 3 and 4, south to Mexico and Central America. Aerial and vessel-based surveys indicate continued departures of Humpback whales from Zones 3 and 4. Humpback whale numbers are above average when compared to historical weekly averages from MBWW data, but numbers are below the Marine Life Concentration trigger and trending downward. This is an indication that the migration out of California waters is well underway.

7. Fishing Season Dynamics

Fishing Zones 5 and 6 opened under a Fleet Advisory on November 15, 2021, and Fishing Zones 1 and 2 opened under a Fleet Advisory on December 1, 2021. Nearly all fishing activity thus far has been in the Northern Management Area, with 96% of harvest from Fishing Zone 1 and over half of the landings made into Crescent City (58.4%) followed by Eureka (28.5%), Trinidad (9.6%), and Fort Bragg (3.5%). Trends in vessel activity generally mirror those of landing volume, with 79 vessels making landings into Crescent City, 61 vessels making landings into Eureka, 26 vessels making landings into Fort Bragg, and 15 vessels making landings into Trinidad.

There are no domoic acid public health advisories currently in effect for Fishing Zone 3 or 4. Fair start provisions are in effect for the opening of both Fishing Zones 3 and 4. Fair start delays will expire for Zone 4 at 12:01 am on January 15, 2022, and for Zone 3 at 12:01 am on January 28, 2022.

Discussion at the Working Group meeting relayed concerns to CDFW that limited crew availability and processor capacity made it unlikely that a season opener prior to January 1 could happen in a fair and orderly manner. Additionally, three recognized port entities from Fishing Zone 3 have clearly stated they need more time for an orderly start to ensure the infrastructure and staffing to support the commercial fishery are in place. Those port associations requested the season opener be delayed until at least December 27, and noted the added benefit of lower entanglement risk with additional delay.

8. Known Distribution and Abundance of Key Forage

Based on aerial and vessel surveys in Fishing Zone 3 and 4, Humpback were observed at a variety of water depths feeding primarily on schooling fish. No sea nettles (leatherback turtle prey) were observed, and only a few large ocean sunfish (*Mola mola*), a sea nettle predator that often co-occurs with leatherback turtles, were observed during aerial surveys in Zones 3 and 4.

9. Ocean Conditions

As of December 9, 2021, there is a 95% chance of La Niña conditions continuing through the Northern Hemisphere winter 2021-22, with a 60% chance of transitioning to ENSO-neutral conditions during spring 2022. The most recent Habitat Compression Index values are for October 2021. At that time, there was low compression, with cooler water habitat available between 25 and 40°N. Compression is often variable during the month of December.

10. Current Impact Score Calculations

- a. Fishing Season – 0
- b. Calendar Year – 1.13 for Humpback whales; 0 for Blue whales and Pacific leatherback sea turtles

11. Marine Life Concentrations and Distribution During the Current Fishing Season

As of December 3, Cascadia Research reported that at least 18 Humpback whales known to be from California waters have arrived in Mexico breeding grounds, some of which are known to be from California waters. Aerial and vessel surveys show Humpback whales are still present in Fishing Zones 3 and 4, but primarily located offshore and declining in all areas. NOAA aerial survey

data observed 33 Humpback whales in the most recent survey compared to 73 Humpback whales in mid-November, and Cascadia vessel surveys observed 19 Humpback whales compared to 60 Humpback whales in early December. Cascadia surveys indicated that most whale sightings still appear to be in deeper water in Zone 4. Additionally, overall sighting frequency of humpback whales in Zones 3 and 4 has dropped from an average of 0.5 whales per nautical mile in early December to 0.2 whales per nautical mile.

Chosen Management Action and Rationale

Based on the management considerations outlined above, the Director will lift the Season Delay and Depth Constraint for the commercial Dungeness crab fishery and temporary trap prohibition for the recreational crab fishery, and modify the existing Fleet Advisory to extend it statewide. The recreational and commercial fisheries will open and the Depth Constraint will be lifted as described in the declaration above.

Pursuant to Section 132.8(b)(4), previously implemented management actions must be lifted or modified as new information is available if a different management action is more appropriate, and those modifications must be undertaken in a manner that promotes a fair and orderly fishery. In consideration of information collected throughout all risk assessments this season, marine life concentrations are trending downward. While small aggregations of Humpback whales remain in Fishing Zones 3 and 4, particularly along the canyon edges and shelf break in Monterey Bay, there have been significant decreases in the numbers of whale seen over the past month, particularly in Zone 3. NOAA aerial surveys documented a decline from 73 humpback whales to 33 humpback whales over a one-month period in Zone 3 (mid-November to mid-December). Cascadia vessel surveys documented a decline from 60 humpback whales to 19 humpback whales over a two-week period based on the latest data contribution (early December to mid-December). Additionally, MBWW weekly average observations have dropped to 4.9, which is below the trigger levels in Section 132.8 and continuing reduction consistent with reported weekly averages over the past weeks.

Information and observations are consistent with published migration trends indicating Humpback whales are leaving California waters at this time of year. Reports from collaborators in Mexico confirm humpback whales from California continue to arrive. We anticipate whale numbers to continue to decrease and entanglement risk to reduce significantly given all indications that the migration south has begun.

Remaining whales observed during surveys were primarily sighted at or near the edge of deep-water canyons. These areas are unlikely to see high levels of fishing effort due to their location on the outer edges of the Fishing Grounds. Given the reduced whale concentrations overall and limited Fishing Activity reported in Fishing Zone 4, the data supports lifting the Depth Constraint in Zone 4. However, it is still clear there are some whales remaining, in particular persistent aggregations off the coast of San Mateo County, and therefore a Fleet

Advisory statewide will provide additional information to allow fishery participants to avoid whales and further reduce entanglement risk.

Pursuant to Section 132.8(d)(7), fleet dynamics were taken into consideration. Following the release of the Department's initial recommendation to open the season in Fishing Zone 3 on December 22, multiple commercial port associations expressed support for an additional delay to allow time for adequate infrastructure and staffing to ensure a fair and orderly opening to the fishery. While the Department initially considered a Fishing Zone 3 season opener on December 22 with a Fleet Advisory, the Department also supports a more precautionary approach of an additional delay. Opening Fishing Zone 3 to commercial fishing and lifting the Depth Constraint in Zone 4 on December 26 will allow additional time for remaining whales to migrate out of California waters, further reducing the already low entanglement risk.

However, given the already low entanglement risk as based on the available data, as well as the anticipated lower intensity of trap use, the recreational fishery will open on December 17 in advance of the commercial fishery. Additionally, Section 132.8(b)(4) requires the Director to lift or modify any restrictions in a manner that promotes fair and orderly fisheries. Here, recreational trap use and commercial fishing in Fishing Zone 3 were both delayed from the traditional season opening dates, which typically provide for a recreational-only fishing period in advance of the commercial season opener. Lifting the temporary prohibition on the use of recreational crab traps on December 17 provides for an orderly start for the use of recreational crab traps consistent with existing expectations and historic practice the recreational fishery will open in advance of the commercial pre-soak.

Although current survey data was not available for Zones 1, 2, 5, and 6, survey data was collected in those Zones in advance of the November 1 risk assessment and sufficiently indicated low presence of whales such that it was no longer necessary to focus available resources in those areas to collect additional data. Given the availability of survey data statewide in advance of November 1, the no data scenarios under Section 132.8(c)(2)(A)(1)-(3) are no longer applicable, and Zones can be evaluated based on the totality of the management considerations and available data (including previous survey data). Fishing Zone 3 reached a marine life concentration trigger, leading to analysis of the management considerations under Section 132.8(d) and appropriate management response under Section 132.8(c). Those sections anticipate a broader analysis of the factors impacting entanglement risk statewide. Although no triggers for management action were met in Fishing Zones 1, 2, 5, and 6, past survey data indicates small concentrations of Humpback whales in those Fishing Zones. Both recreational and commercial fleets should use additional precaution when setting gear in those areas. A Fleet Advisory under section 132.8(e) is not necessarily limited to a single Fishing Zone, and compliance with best management practices throughout the state will ensure that entanglement risk continues to remain low for any remaining Humpback whales in those Fishing Zones.